

REMARKS

Claims 1, 9, 11-13, 16, 18-21, 23-25, 31-37, 45, 50, 52 and 53 are pending in the application. Claims 1, 11, 13, 18, 31, 45, have been amended. Support for these amendments can be found in the claims as filed and at least page 10 of the specification. No new matter has been added. Claims 2-8, 10, 14, 15, 17, 22, 26-30, 38-44, 46-49, 51 and 54-59 have been canceled.

Drawings

The Examiner has objected to the drawings as they fail to show the information as described in the Brief Description of the Drawings. Applicants have amended the Brief Description of the Drawings to correspond to what is shown in the drawings. No new matter has been added.

Claim Objections

Claim 1, 15, 31 and 51 are objected to because of they encompass non-elected subject matter. Claims 1 and 31 have been amended to recite *in vivo*. Claims 15 and 51 have been canceled. This objection should be withdrawn.

Rejection under 35 U.S.C. §112, First Paragraph- Written Description

Claims 1-5, 31-37 and 45-49 have been rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. Specifically, the Examiner states the specification fails to disclose any flavor-heme oxido reductase polypeptide other than NcB5or. Applicants have amended independent claims 1, 31, and 45 to recite specific NcB5or polypeptide expressly described in the specification-- namely SEQ ID NOs:2, 3, 4, or 5. Accordingly, Applicant asserts the claims as amended meet the written description requirement. This rejection should be withdrawn.

Rejection under 35 U.S.C. §112, First Paragraph-Enablement

Claims 1-5, 9, 11-16, 18-21, 23-25, 31-37 and 45-53 have been rejected under 35 U.S.C. §112, first paragraph, for lack of enablement.

Claims 2-5, 9, 14, 15, 46-49, and 51 have been canceled, thus this rejection is moot with respect to these claims.

Independent claims 1, 13, 31, and 45 have been amended to recite specific Ncb5or polypeptides and/or to require that the cell is a pancreatic cell.

Specifically, the Examiner states an observed phenotype that is the result of a gene deletion does not mean that treatment of a subject with a compound that replaces the deleted gene results in the alleviation of the observed phenotype. Applicant disagrees. Figure 4c demonstrates that Ncb5or +/- (i.e. heterozygote's) have normal blood sugar levels and glucose tolerance. This data demonstrates that having a functional Ncb5or polypeptide results in normal glucose homeostasis. Accordingly, one skilled in the art would reasonably expect that replacing the deleted polypeptide would result in the alleviation of a sign or symptom of diabetes.

Applicants assert the claims as amended are enabled. This rejection should be withdrawn.

Rejection under 35 U.S.C. §112, Second Paragraph

Claims 11, 18 and 23 have been rejected under 35 U.S.C. §112, second paragraph, for being indefinite. Applicant has amended claims 11, 18, and 23 to recite said "compound" This rejection should be withdrawn.

Rejection under Rejection under 35 U.S.C. §102(b)

Claims 45-48 and 51 have been rejected under Rejection under 35 U.S.C. §12(b) as being anticipated by WO 01/155301. Claims 46-58 and 51 have been canceled. Claim 45 has been amended to encompass specific polypeptide sequence not encompasses by SEQ ID NO: 1726 of WO 01/155301. Accordingly, this rejection should be withdrawn.

CONCLUSION

Applicant respectfully submits that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,



Cynthia A. Kozakiewicz, Reg. No. 42,764
Attorney for Applicant
c/o MINTZ, LEVIN
Tel: (617) 542-6000
Fax: (617) 542-2241
Customer No. 30623

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